

## RECORDS OF BAT FLIES FROM JORDAN, LIBYA AND ALGERIA<sup>1</sup>

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**ABSTRACT:** Eight species of bat flies (Insecta: Diptera: Streblidae and Nycteribiidae) collected from bats from Jordan, Libya and Algeria are listed along with their respective hosts. *Brachytarsina flavipennis*, *Stylidia biarticulata*, *Stylidia integra* and *Basilia nana* are new records for Jordan.

In the course of extensive collecting throughout Jordan, Libya and Algeria in 1981, several species of ectoparasites were removed from bats. Although the Chiroptera of Jordan and North Africa have been studied (Qumsiyeh 1980, Qumsiyeh *et al.* In press, Hufnagl 1972, Hayman and Hill 1971), little information is available on their associated bat flies.

The only record of a bat fly from Jordan was reported by Kock and Nader (1979). Anciaux de Faveaux (1976) provided a list of parasitic insects from Algerian bats and Hurka (1982) reported on the bat flies of coastal Libya.

This paper provides additional records of bat flies from Libya, Algeria and Jordan.

### MATERIALS AND METHODS

Bats were collected by mistnet or while roosting in caves or crevices. A total of 63 bats were collected: 12, 15 and 36 from Jordan, Libya and Algeria respectively. Each bat was individually examined and their ectoparasites were stored in vials containing 75% alcohol. "n" designates the number of bats examined.

### Systematic List

#### Family Streblidae

#### *Brachytarsina flavipennis* Macquart 1851

#### Material examined:

Jordan: Wadi Khanzairah (W.Araba), 9.2.1981, ex 2M, *Rhinolophus blasii* (n = 7).

Libya: Kuf National Park, 13.3.1981, ex 6M, *Rhinolophus mehelyi* (n = 9).

Algeria: Misserghin Cave, 7.5.1981, ex 1F, *Myotis blythi* (n = 10).

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Remarks: This species has been reported from *Miniopterus schreibersi* and several species of the genus *Rhinolophus* (Theodor 1967). Hurka (1982) indicated its presence on *R. mehelyi*.

### Family Nycteribiidae

#### *Stylidia biarticulata* (Harmann 1864)

Material examined:

Jordan: Wadi Khanzairch (W. Araba), 9.2.1981, ex 2M, *Rhinolophus blasii* (n = 7).

Libya: Kuf National Park, 13.3.1991, ex 1M, *R. mehelyi* (n = 9).

Algeria: Misserghin Cave, 7.5.1981, ex 1M, 2F, *Myotis blythi* (n = 10).

Tipasa, 5.7.1981, ex 1M, 1F, *Miniopterus schreibersi* (n = 2).

Tipasa, 5.7.1981, ex 1M, *R. mehelyi* (n = 1).

Remarks: Theodor (1967) reported *Stylidia biarticulata* from *Rhinolophus euryale*, *R. ferrumequinum*, *R. hipposideros minimus*, *R. blasii*, *Myotis myotis* and *Miniopterus schreibersi*. Hurka (1982) considered *Stylidia biarticulata* to be a westpalaearctic species.

#### *Stylidia integra* (Theodor and Moscona 1954)

Material examined:

Jordan: Dibbin National Park, 27.2.1981, ex 1M, *Rhinolophus hipposideros* (n = 1).

Remarks: Kock and Nader (1979) commented on the distribution of *S. integra* and they suggested this species represents a saharosindian faunal element. It is known from *Rhinolophus blasii* and *R. acrotis* (Theodor 1965).

#### *Basilina nana* Theodor and Moscona 1954

Material examined:

Jordan: Dibbin National Park, 27.2.1981 and 9.8.1981, ex 1M, 3F, *Myotis nattereri* (n = 1).

Remarks: It seems that *Basilina nana* is host-specific for the genus *Myotis*. Theodor (1965) reported *Myotis nattereri* and *M. myotis* as hosts for *Basilina nana*.

#### *Basilina daganiae* Theodor and Moscona 1954

Material examined:

Libya: Kuf National Park, 15-16.3.1981, ex, 1M, 3F, *Pipistrellus pipistrellus* (n = 5).

8 km SSE Haniya, 3.4.1981, ex 1M, *P. pipistrellus* (n = 1).

Remarks: Theodor (1965) reported that *Basilia daganiae* parasitized *Pipistrellus Kuhlii* in Deganya.

***Penicillidia dufouri* (Westwood 1835)**

Material examined:

Algeria: Misserghin Cave, 7.5.1981, ex 4M, 3F *Myotis blythi* (n = 10).

Cap Aokas, 23.6.1981, ex 1M, 3F, *M. blythi* (n = 3).

Tipasa, 5.7.1981, ex 1M, *Miniopterus schreibersi* (n = 2).

Tipasa, 5.7.1981, ex 1M *Rhinolophus euryale* (n = 11).

Remarks: *Rhinolophus hipposideros* was reported as host of this bat fly (Theodor 1967).

***Nycteribia pedicularia* Latreille 1796**

Material examined:

Algeria: Misserghin Cave, 7.5.1981, ex 1F, *Myotis blythi* (n = 10).

Remarks: *Rhinolophus hipposideros minimus*, *R. euryale* and *Miniopterus schreibersi* are known hosts for *Nycteribia pedicularia* (Vermeil 1960, Theodor 1967).

***Nycteribia schmidlii* Schiner 1853**

Material examined:

Algeria: Misserghin Cave, 7.5.1981, ex 1M, 3F, *Miniopterus schreibersi* (n = 8).

Sig cave, 9.5.1981, ex 1M, 3F, *M. blythi* (n = 1).

Tipasa, 5.7.1981, ex 2M, 1F, *R. euryale* (n = 1).

Tipasa, 5.7.1981, ex 2M, 6F, *Miniopterus schreibersi* (n = 2).

Remarks: In addition to the above species, *Nycteribia schmidlii* has been taken from *Rhinolophus ferrumequinum* and *Myotis mehelyi* (Falcoz 1923, Theodor 1967).

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## SOCIETY MEETING OF NOVEMBER 18, 1992

### ECOLOGY OF PAVEMENT ANTS

Mr. Thomas King,  
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We are all well aware of the detrimental effects of increasing urbanization and development on the natural environment, including the loss of diverse habitats and the numerous insect denizens which occur there. The informative and humorous presentation by Mr. Thomas King, drawing upon his own observations and those of others, reminds us that there are numerous insects, among these the pavement ant, *Tetramorium caespitum* (Linnaeus), who find in urbanization an opportunity for range expansion and population growth.

The pavement ant, although probably evolved in Europe or Africa, is now found scattered throughout the world, including diverse places as Belize, Chile, North America and Australia. Although possibly arriving in North America with the early European colonists, it continues its rapid spread at a local level even today. For example, a monograph on the ants of Colorado in the early 1960's stated that *Tetramorium caespitum* was absent from Denver; during a recent trip to Denver, Mr. King found the ant abundant everywhere he looked. The success of the pavement ant in cities is most probably related to the habitat in which it originally evolved, i.e., open areas of scarce, low vegetation. It is equally at home in the wall-to-wall pavement of any major city (thus its apt common name), or in the lawns of the suburbs.

Mr. King's interest in ants in general extends back to age 7. More recently, his ant research has included one year studying the fire ant at Texas Tech University, and continues with observations on interactions between the introduced *Tetramorium caespitum* and other ant species in the Philadelphia area. Surprisingly, although the pavement ant is well adapted to the urban and disturbed environment, it does face severe competition from

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